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Group Art Unit: 1714
Docket No.: 160P1582USWO

Remarks

Claims 1-37 are pending in the application. Claims 1, 24 and 33 are amended. The amendments are supported by the specification. No new subject matter is added. Applicant requests reconsideration.

Interview Summary

Applicants thank Examiner Niland for his courtesy during the interview with applicant, Howard Killilea, Applicants' attorney, William F. Prout, on June 10, 2008. The formal issues and art rejections were discussed. The Examiner agreed that the amendment of claim 33 to recite a polyurethane-vinyl polymer in place of "polyurethane-polyethylene polymer" would overcome the formal objection. In addition, the other formal rejection and art rejections were discussed. There were several suggestions for amendments to the claims discussed. The examiner advised that he would consider the amendments and remarks when the response to the Office Action was filed.

The above account is believed to be a complete and accurate summary of the telephonic interview as required by 37 C.F.R. § 1.133. If the Examiner believes that this summary is inaccurate or incomplete, Applicants respectfully request that the Examiner point out any deficiencies in his next communication so that Applicants can amend or supplement the interview summary.

Rejection under 35 U.S.C. § 112

Claims 24 and 33 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. To the extent that this rejection can be maintained against the amended claims it is respectfully traversed.

A. In regard to claim 24, the Office Action states that there is no antecedent basis in claims 24 or 1 for "the sulfonated polymer". The claims have been amended to indicate that the

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"sulfonated polymer" referred to in claim 24 is the sulfonated polyurethane polymer recited in claim 1. In regard to the derivatives of 5-sulfo-isophthalic acid, the claim is amended to recite 5-sulfo-isophthalic acid or salts thereof. These acids and salts are disclosed in the specification, e.g., see page 3, lines 23-26, and page 7, line 25 to page 8, line 3.

B. In regard to claim 33, the Office Action states that

"It is unclear what is intended by "polyurethane-polyethylene polymer" in claim 33. The claimed components do not require "ethylene". It is therefore unclear if this preamble is intended to require polyethylene or if any vinyl monomer combinations, including those that do not include ethylene are intended by the claim language." (See Office Action at page 2, fourth paragraph.)

Applicant has amended the claim as suggested by the examiner during the telephonic interview to recite a – polyurethane-vinyl polymer – in place of "polyurethane-polyethylene polymer" to improve the clarity of the claim.

The claims are not indefinite. It is respectfully requested that the rejections under 35 U.S.C. § 112, second paragraph be withdrawn.

Rejection under 35 U.S.C. § 103

Claims 1-33 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Tomko *et al.* (U.S. Patent No 6,166,127, "the '127 patent") in view of Floyd *et al.* (U.S. Patent No.5,422,392, "the '392 patent") and Hoefer *et al.* (U.S. Patent No. 4,977,207, "the '207 patent"). This rejection is respectfully traversed.

Reconsideration is requested. As amended, the claims require a composition which has a polyurethane having ethylenic groups and a second polymer formed from unsaturated monomers in the presence of the sulfonated polyurethane polymer. The '127 patent discloses that the polyurethane prepolymer is dispersed into a latex composition (waterborne polymer component) and chain extended with the waterborne copolymer component. The non-polyurethane polymer(s) are prepolymerized before the polyurethane polymer is prepared. (See, e.g., column 2, lines 14-15, line s 31-32, column 3, lines 32-33, and column 10, lines 5-62

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(Examples 1-2.) The '127 patent fails to disclose the polyurethane having ethylenic groups and unsaturated monomers that are polymerized in the presence of the polyurethane polymer.

The Office Action adds the '392 patent to include compositions having a low VOC. The '392 patent fails to disclose sulfonated polyurethanes with ethylenic groups. The claims require a polyurethane polymer comprising ethylenic groups. This is not disclosed or suggested in the '392 patent.

The Office Action is silent regarding the reason for including the '207 patent. It is believed to be included because of a disclosure of sulfonated polyols. This document also fails to disclose or suggest a polyurethane polymer comprising ethylenic groups and a second polymer formed by the polymerization of unsaturated monomers in the presence of the polyurethane polymer.

The composition providing a polyurethane comprising ethylenic groups and a second polymer formed from unsaturated monomers in the presence of the sulfonated polyurethane polymer is not disclosed or suggested by the cited documents. Applicants submit that the combination of cited documents fails to include a disclosure of all the limitations of claim 1. Thus, the Office Action has failed to present a *prima facie* case of obviousness. Accordingly, it is respectfully requested that the rejection of the claims under 35 U.S.C. § 103 be withdrawn.

Rejection under 35 U.S.C. § 102

Claims 1-23, 25, 29-32 and 34-37 have been rejected under 35 U.S.C. 102(b) as being anticipated by Matsumoto *et al.* (U.S. Patent No 5,916,965, "the '965 patent"). This rejection is respectfully traversed.

For anticipation under 35 U.S.C. § 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present, see MPEP § 706.02.

The Office Action states that

Matsumoto discloses the instantly claimed inventions at the abstract and entire document which encompasses the instantly claimed compositions comprising polyurethanes having unsaturated groups and sulfonate groups from sulfonated

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polyols in the presence of vinyl monomers, ..." (See Office Action page 5, lines 13-16.)

The '965 patent does not anticipate the instant claims. At column 4, the '965 patent discloses reacting a polyurethane with ethylenic unsaturated monomers to form a polyurethane graft-polymer. (See column 2 lines 55-60.) The monomers are polymerized in the presence of the urethane having allyl groups. The allyl groups of the urethane are said to react with the ethylenic unsaturated monomers to form the graft polymer, which provides a urethane polymer without ethylenic groups. Thus, the '965 patent will not have a second polymer formed from vinyl monomers.

The '965 patent does not anticipate the instant claims because the '965 patent does not disclose a polyurethane-vinyl polymer composition having a polyurethane comprising ethylenic groups and a second polymer formed from vinyl monomers. The ethylenic groups of the sulfonated polyurethane can be react when the composition is cured. Thus, the '965 patent is missing two elements from the instant claims, a polyurethane having ethylenic groups and the second polymer formed from vinyl monomers.

Accordingly, it is respectfully requested that the rejection of the claims under 35 U.S.C. § 102(b) be withdrawn.

Rejection under 35 U.S.C. § 103

Claims 1-32 and 34-37 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto *et al.* (U.S. Patent No 5,916,965, "the '965 patent"). This rejection is respectfully traversed.

In order for a claim to be obvious, the cited document(s) must disclose each element of the claims. As discussed above, the '965 patent discloses polyurethane graft polymers and fails to disclose a polyurethane having ethylenic groups a polyurethane having ethylenic groups and the second polymer formed from vinyl monomers.

Thus, the claims are not obvious in view of the '965 patent. Accordingly, it is respectfully requested that the rejection of the claims under 35 U.S.C. § 102(b) be withdrawn.

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CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 455-2564 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 50-0549.

Respectfully submitted on behalf of
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Date: July 14, 2008

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